

WHAT IS CLAIMED IS:

1. A method of suppressing interference in a radar device, comprising the steps of:
 - transmitting signals with a carrier frequency;
 - transmitting the signals as pulsed signals with a pulse repetition frequency; and
 - varying the pulse repetition frequency during operation of the radar device.
2. The method according to claim 1, further comprising the step of varying the carrier frequency during operation of the radar device.
3. The method according to claim 1, wherein the pulse repetition frequency is varied deterministically in the pulse repetition frequency varying step.
4. The method according to claim 1, wherein the pulse repetition frequency is varied chaotically in the pulse repetition frequency varying step.
5. The method according to claim 2, wherein the carrier frequency is varied in the carrier frequency varying step by phase modulation.
6. The method according to claim 2, wherein the carrier frequency is varied in the carrier frequency varying step by frequency modulation.
7. The method according to claim 1, further comprising the steps of:
 - varying the carrier frequency by frequency modulation;
 - producing a virtual intermediate frequency by mixing a received signal with the modulated carrier frequency; and
 - analyzing a received signal at the virtual intermediate frequency.

8. The method according to claim 2, wherein the carrier frequency is varied in the carrier frequency varying step by a sudden frequency change method.

9. A method of suppressing interference in a radar device, comprising the steps of:

transmitting signals with a carrier frequency;
pulsing the signals transmitted with a pulse repetition frequency; and
varying the carrier frequency during operation of the radar device.

10. The method according to claim 9, further comprising the step of varying the pulse repetition frequency during operation of the radar device.

11. The method according to claim 10, wherein the pulse repetition frequency is varied deterministically in the pulse repetition frequency varying step.

12. The method according to claim 10, wherein the pulse repetition frequency is varied chaotically in the pulse repetition frequency varying step.

13. The method according to claim 9, wherein the carrier frequency is varied in the carrier frequency varying step by phase modulation.

14. The method according to claim 9, wherein the carrier frequency is varied in the carrier frequency varying step by frequency modulation.

15. The method according to claim 9, wherein the carrier frequency is varied in the carrier frequency varying step by frequency modulation, the method further comprising the steps of:

creating a virtual intermediate frequency by mixing a received signal with the modulated carrier frequency; and analyzing the received signal at the virtual intermediate frequency.

16. The method according to claim 9, wherein the carrier frequency is varied in the carrier frequency varying step by a sudden frequency change method.

17. A radar device comprising:
a first arrangement configured to transmit signals with a carrier frequency;
a second arrangement configured to pulse the signals with a pulse repetition frequency; and
a third arrangement configured to vary the pulse repetition frequency during operation of the radar device.

18. The radar device according to claim 17, further comprising a fourth arrangement configured to vary the carrier frequency during operation of the radar device.

19. The radar device according to claim 17, wherein the third arrangement is configured to vary the pulse repetition frequency deterministically.

20. The radar device according to claim 17, wherein the third arrangement is configured to vary the pulse repetition frequency chaotically.

21. The radar device according to claim 18, wherein the fourth arrangement is configured to vary the carrier frequency by phase modulation.

22. The radar device according to claim 18, wherein the fourth arrangement is configured to vary the carrier frequency by frequency modulation, the radar device further comprising:

a fifth arrangement configured to create a virtual intermediate frequency by mixing a received signal with the modulated carrier frequency; and

a sixth arrangement configured to analyze the received signal at the virtual intermediate frequency.

23. The radar device according to claim 18, wherein the fourth arrangement is configured to vary the carrier frequency by a sudden frequency change method.

24 A radar device comprising:

a first arrangement configured to transmit signals with a carrier frequency;

a second arrangement configured to pulse the signals with a pulse repetition frequency; and

a third arrangement configured to vary the carrier frequency during operation of the radar device.

25. The radar device according to claim 24, further comprising a fourth arrangement configured to vary the pulse repetition frequency during operation of the radar device.

26. The radar device according to claim 25, wherein the fourth arrangement is configured to vary the pulse repetition frequency deterministically.

27. The radar device according to claim 25, wherein the fourth arrangement is configured to vary the pulse repetition frequency chaotically.

28. The radar device according to claim 24, wherein the third arrangement is configured to vary the carrier frequency by phase modulation.

29. The radar device according to claim 24, wherein the third arrangement is configured to vary the carrier frequency by frequency modulation, the radar device further comprising:

a fourth arrangement configured to create a virtual intermediate frequency by mixing a received signal with the modulated carrier frequency; and

a fifth arrangement configured to analyze the received signal at the virtual intermediate frequency.

30. The radar device according to claim 24, wherein the third arrangement is configured to vary the carrier frequency by a sudden frequency change method.